

Chapman's Flora.⁵

THE name of Dr. Chapman has been closely associated with the flora of our southern states for three quarters of a century, a record of botanical activity that is almost without parallel. The new edition of his manual is printed from new plates, and the two supplements of the second edition have been incorporated in the body of the work. The conditions under which the author has been compelled to work have prevented the introduction of many changes that would naturally be expected in a new edition. The present volume is essentially the same that the others have been, and this fact of course makes it seem very conservative. It is hardly to be expected that matters of nomenclature and citation could have received critical attention, as they would have involved an amount of labor that the venerable author could not afford. But it is a distinct disappointment that the many new forms recently described by others from the region of the manual have not been sifted and included. It is a good thing to bring material together, and that is the chief purpose of a manual as distinct from a monograph. This omission will work to the disadvantage of the ordinary collector and student of the southern flora who does not have access to the scattered descriptions contained in periodical publications.

However, Dr. Chapman's manual still remains the only manual of this region, and is certainly indispensable. Botanists have a deep feeling of gratitude to the venerable author who has laid them under obligation for so many years.—J. M. C.

The principles of fruit growing.⁶

THIS is the comprehensive title of the last issued volume of the "Rural Science Series." It is a book of over 500 pages, written by the editor of the series, Professor L. H. Bailey. It is well for the credit and long continued usefulness of this work that it was not attempted ten years ago when the author was younger in experience and lacked the busy years during which he has been in touch with the thinking, reading, and practical fruit growers across the continent.

The book is in no sense a descriptive fruit book, with some practical instructions on propagation and orchard management, but, as its title indicates, states the general principles which underlie all fruit culture. It is a masterly joining of science with practice, under varied conditions of soil and climate in the United States and Canada. Varieties are not discussed except in the way of illustrating principles involved in the varied discussions. The

⁵CHAPMAN, A. W.—Flora of the Southern United States. Third edition. 8vo. pp. xxxix + 665. Cambridge, Mass.: Cambridge Botanical Supply Company. 1897. \$4.00

⁶BAILEY, L. H., The principles of fruit growing. 12mo. Pp. xii + 508. Figs. 114. New York: Macmillan Co., 1897. \$1.25.

different countries of Europe have books of this character, but up to the present our literature on the science and art of fruit growing has been scattered in horticultural reports and papers, and the bulletins of our experiment stations. In this book they are collected and added to from the personal experiences and observations of the author, joined with comparison of views made possible by contact with successful growers and managers.

In our relatively new country we have not yet reached final conclusions as to the exact climatic adaptation of varieties and species to special conditions of soil and air referred to by Professor Bailey under the head of "determinants," as has been done in most parts of Europe. But remarkable advances have recently been made in all divisions of the work of fruit growing, adaptation to markets, etc., and this work covers the ground so completely that even western growers find little room for criticism. Every page will furnish food for thought to the amateur and commercial grower on such topics as spraying, selection of orchard sites, winter evaporation of trees, soil adaptation to varieties, commercial outlook of fruit growing, fruit packing in its details, retardation of bloom, orchard wind breaks, air drainage and soil drainage, influence of frost and water, the stored food of varieties as affected by climate, effects of mulching, laying down tender trees, tillage of fruit lands, conservation of moisture, fertilization of orchard and nursery, the uses of nitrogen in orchards, soils, potash for fruit, alternating varieties for fertilization of blossoms, shading of tree stems in open exposure, and many other topics coming up each day in the individual experience. Besides its use to the actual fruit grower, it is really a book which can be used to the advantage of the prospective fruit growers in the horticultural class rooms of our agricultural colleges.—J. L. BUDD.

A few familiar flowers.⁷

UNDER the above title a new book of suggestions for teachers of small children has appeared. In these days of that chaotic subject known as "nature study" such books are eagerly sought by the poorly trained teacher, and most of them are poorly trained for "nature study." How to interest little people in plants, to teach them to observe wisely, and at the same time to keep well within the limits of knowledge, is a very serious problem. A sort of speculation is usually indulged in which is exceedingly unsafe, and which results in notions that are difficult to banish. The whole truth cannot be told, and it is difficult sometimes to tell a partial truth without, in effect, contradicting the larger truth. It is probably true that the professional botanist is apt to be captious in his criticism of all such attempts, and that he loses sight of the larger end in view.

⁷ MORLEY, MARGARET WARNER.—A few familiar flowers; how to love them at home or in school. 8vo. pp. xiv + 274. Boston: Ginn & Company, 1897. 70 cents